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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,202	09/10/2003	Tery John Evans	2003P08454 US	5586

7590 08/03/2005
Elsa Keller
Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

LEJA, RONALD W

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 08/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/659,202

Applicant(s)

EVANS ET AL.

Examiner

Ronald W. Leja

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claims 1, 5, 31, 34 and 38 are objected to because of the following informalities: In Claims 1, 34, and 38, "the sense resistor" should probably be "the sensing resistor" for consistency purposes. "The ASIC circuit" in Claim 5 should probably be "an ASIC circuit" for proper antecedent basis purposes. The second sentence in Claim 31 needs to be deleted. Appropriate correction is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 10, 30, 34 and 37 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Leppo (5,744,939).

See Figure 3 and protecting a battery.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that

was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 5, 11, 35 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leppo in view of Chu et al. (US 2004/0070495 A1).

These set of Claims are drawn to use of an ASIC circuit. Leppo does not appear to disclose use of an ASIC. However, Chu et al. teach the use of an ASIC circuit wherein temperature compensation of a sensor is also accomplished. It would have been obvious to implement some or all of the circuitry into an ASIC so as to save in space constraints and lower the number of necessary components, thereby stream lining the overall product.

Claims 3, 6-9, 12-15, 31-33, 36 and 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leppo in view of Pinckaers (3,817,453).

These set of Claims are drawn to use of an op-amp, and PTC as well as NTC thermistors and whether they are linear or ceramic. Leppo is somewhat silent about such issues. Pinckaers teaches temperature compensation and wherein an op-amp is used and that not only NTC thermistors were used, but that also PTC thermistors are used. It would have been obvious to use an op-amp for the precise gain characteristics, which can be set externally in the feedback, thereby increasing degree of device performance as well as increasing possible applications. It would have been obvious to use a NTC thermistor as a means to dissipate less energy during compensation, as the temperature increases, its resistance decreases. Use of PTC thermistor would have been obvious as a means to also limit the current while still offering compensation, as its resistance increases with temperature rise, and thus, if

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the fault was other than temporary, limited current would help to increase protection to the load. As far as linear and ceramic, each application and desired degree of precision would affect which characteristic of a thermistor was important. Linearity would have been obvious so one would be able to know the approximate level of the sensed current at anytime during sensing of the current, via the resistive response from the thermistor, thereby allowing tracking of system performance for future possible changes. Use of ceramic thermistors allow for a longer shelf-life of the thermistor without corrosion concerns, as there would not be any metals particles, which could oxidize due to humidity, which would also affect results of the compensation.

Claims 16, 18-23 and 25-29 rejected under 35 U.S.C. 103(a) as being unpatentable over Leppo in view of Pinckaers as applied to the claims above, and further in view of Dunk et al. (5,475,371).

Claims 16 and 23 are drawn to use in AFCI environments. Although Leppo offers temperature compensation of a sensed current for battery cell protection, AFCI is not mentioned. In-Spite-Of-The-Fact, it is the opinion of the Examiner that in view of Dunk et al., which teach temperature compensation of a sensed signal for fault detection and protection of a system, it would have been obvious to apply temperature compensation to any fault detecting scheme, such as, an AFCI fault detecting scheme, thereby, minimizing the effect of temperature change upon sensor output, resulting in increased accuracy and reliability of the fault protection scheme. The remaining claims are rejected for the reasons proffered in the rejection above.

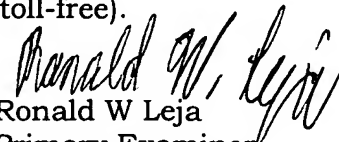
Claims 17 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leppo in view of Pinckaers and Dunk et al. as applied to Claims 16 and 23 above, and further in view of Chu et al..

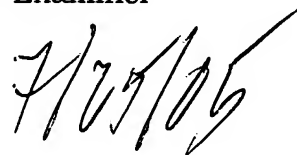
These set of Claims are drawn to use of an ASIC circuit. Leppo does not appear to disclose use of an ASIC. However, Chu et al. teach the use of an ASIC circuit wherein temperature compensation of a sensor is also accomplished. It would have been obvious to implement some or all of the circuitry into an ASIC so as to save in space constraints and lower the number of necessary components, thereby stream lining the overall product.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald W. Leja whose telephone number is (571)272-2053. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)272-2800. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ronald W Leja
Primary Examiner



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July 25, 2005